NON-TUBERCULOUS MYCOBACTERIAL INFECTION IN A CHILD OPERATED FOR APPENDECTOMY

Lavina Desai¹, Ira Shah²
¹Seth G S Medical College, Mumbai, India, and ²Pediatric Infectious Diseases, Levioza Health Care, Mumbai, India.

Clinical Problem
A 12-year-old boy presented in November 2013 with abdominal pain and vomiting. He was operated for acute appendicitis with a perforation 5 months ago. His current CT scan abdomen showed a short segment stricture in the ileum with moderate dilation of proximal ileum and jejunal loops. He was operated for the same and a lymph node biopsy from the abdomen was taken and sent for histopathology and tuberculosis PCR. Histopathology showed reactive lymph nodes and PCR test was positive for non-tuberculous mycobacterial (NTM) infection. He was referred to us for further management in view of NTM report. On examination, he had no abnormality.

Should this child be given anti-tuberculous therapy?

Discussion
NTM have emerged as important opportunistic pathogens.¹ NTM exists widely in soil and water and the highest rate of NTM colonization is found in hospitals and hemodialysis with rates ranging from 60%- 100%. Mycobacterium Avium colonization is more likely on recirculating water systems in hospitals.² Other important species responsible for outbreaks include M. Fortuitum, M. abscessus and M chelonae. NTM are ubiquitous in the environment and isolation of NTM from a clinical specimen may represent colonization, infection, and pseudo-outbreaks in healthcare settings.² Colonization is defined as the establishment of NTM within the patient’s microflora without evidence of disease or tissue invasion. A pseudo-infection is defined as a positive culture result from a patient without evidence of true infection or colonization which is typically caused by contamination during specimen handling.² Disease outbreaks usually involve sternal wound infections, plastic surgery wound infections and or postinjection abscesses. Pseudo-outbreaks most commonly relate to contaminated bronchoscopes and endoscopic cleaning machines and contaminated hospital water supplies.³ An increase in positive acid-fast bacilli smears and cultures obtained from patients without a compatible clinical syndrome, like in our case, should prompt evaluation of pseudo-outbreak.² Whereas NTM infection in post-operative wound should be suspected in all post-operative wound infections which occur late and lack local and systemic signs pyogenic infections and have sterile cultures.³ They usually show delayed healing and do not respond to the antibiotic used for acute pyogenic infections.⁴ Analysis of species of NTM and the specimen source may assist in determining the significance of a cluster of isolates. Once an outbreak or pseudo-outbreak is suspected, molecular techniques should be applied promptly to determine the source and identify proper control measures.²,⁵ Prevention of nosocomial infections and pseudo-infections due to NTM can be challenging and include disinfectants, strict de-contamination of endoscopes and hospital water systems, single used medical devices and medication vials.² A pseudo-outbreak does not need treatment.

Compliance with Ethical Standards
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References: